

Patent Application 09/658,432
Docket No. P13433US2

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently amended) A method of consistently selecting a particular Packet Data Service Node (PDSN) from a plurality of PDSNs in a packet data network to host a data session for a Mobile node (MN), said method comprising the steps of:

storing a static lookup table in a Packet Core Function (PCF), said table including a list of identifiers for MNs and an associated list of the plurality of PDSNs in the network;

utilizing the lookup table by the PCF to associate ~~the~~ an identifier for the MN with ~~a~~ the particular PDSN; ~~and~~

selecting the ~~associated~~ particular PDSN by the PCF to host the data session for the MN;

storing in a cache memory of the PCF, an identifier for the MN and an Internet Protocol (IP) address for the particular PDSN for a predetermined period of time after handing off the MN to another PCF;

determining whether the MN returned to the PCF within the predetermined period of time; and

reselecting the particular PDSN to host the data session if the MN returned to the PCF within the predetermined period of time.

Claim 2 (Original) The method of consistently selecting a particular PDSN of claim 1 wherein the network includes a plurality of PCFs, and the step of storing a static lookup table in a PCF includes storing the lookup table in every PCF in the network.

Claim 3 (Original) The method of consistently selecting a particular PDSN of claim 2 further comprising the steps of:

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performing a dormant handoff procedure to hand off the MN from a source PCF to a target PCF in the network, said dormant handoff procedure including the step of passing the identifier for the MN to the target PCF;

utilizing the lookup table by the PCF to associate the an identifier for the MN with the selected PDSN; and

connecting the MN to the selected PDSN by the target PCF.

Claims 4-5 (Canceled)

Claim 6 (Currently amended) A ~~The method of consistently selecting a particular Packet Data Service Node (PDSN) from a plurality of PDSNs in a packet data network to host a data session for a Mobile node (MN);~~ of claim 2 ~~said particular PDSN being selected by a plurality of Packet Core Functions (PCFs) in the network,~~ said the method further comprising the steps of:

initially selecting, by ~~a first~~ the PCF, the particular PDSN to host the data session;

sending an information message from the ~~first~~ PCF to the MN via a Base Station Controller (BSC) with an indication of the ~~Internet Protocol (IP)~~ IP address of the particular PDSN; and

passing the IP address of the particular PDSN from the MN to at least ~~any other~~ another PCF where the MN roams in the network.

Claim 7 (Currently amended) ~~The method of consistently selecting a particular PDSN of claim 6~~ 1 ~~wherein the step of initially selecting the particular PDSN to host the data session includes the steps of:~~

~~storing a static lookup table in the first PCF, said table including a list of identifiers for MNs and an associated list of the plurality of PDSNs in the network;~~

~~obtaining by the first PCF, an identifier for the MN; before~~

~~utilizing the lookup table by the first PCF to associate the identifier for the MN with a~~ the particular PDSN; ~~and~~

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~~selecting the associated PDSN by the first PCF to host the data session for the MN.~~

Claim 8 (Currently amended) The method of consistently selecting a the particular PDSN of claim 6 wherein the indication of the IP address of the selected PDSN is a PDSN zone ID.

Claim 9 (Currently amended) A Packet Core Function (PCF) that consistently selects a particular Packet Data Service Node (PDSN) from a plurality of PDSNs in a packet data network to host a data session for a Mobile Node (MN), said PCF comprising:

a static lookup table that includes a list of identifiers for MNs and an associated list of the plurality of PDSNs in the network;

~~means for obtaining an identifier for the MN;~~ and

~~a hash function that associates~~ means for associating the identifier for the MN with the particular PDSN utilizing the lookup table, and ~~selects~~ selecting the particular PDSN to host the data session for the MN;

a cache memory that stores the identifier for the MN and an Internet Protocol (IP) address for the particular PDSN for a predetermined period of time after handing off the MN to another PCF;

a cache timer for determining when the predetermined time period has expired;
and

means for reselecting the particular PDSN to host the data session if the MN returns to the PCF within the predetermined period of time.

Claim 10-11 (Canceled)